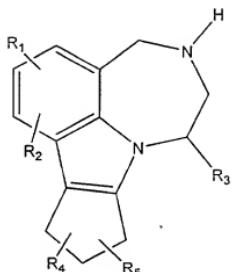


### What is Claimed

1. A process for preparing compounds of the formula:



5 wherein:

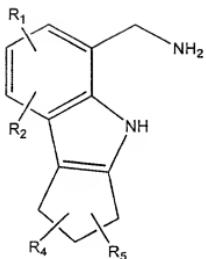
$R_1$ ,  $R_2$ ,  $R_4$  and  $R_5$  are each independently, hydrogen, hydroxy, alkyl of 1-6 carbon atoms, cycloalkyl, alkoxy of 1-6 carbon atoms, halogen, fluorinated alkyl of from 1 to 6 carbon atoms,  $-CN$ ,  $-NH-SO_2-alkyl$  of 1-6 carbon atoms,  $-SO_2-NH-alkyl$  of 1-6 carbon atoms, alkyl amide of 1-6 carbon atoms, amino, alkylamino of 1-6 carbon atoms, dialkylmino of 1-6 carbon atoms per alkyl moiety, fluorinated alkoxy of 1-6 carbon atoms, acyl of 2-7 carbon atoms, aryl or aroyl;

10 carbon atoms, aryl, amide of 1-6 carbon atoms, amine, alkylamino of 1-6 carbon atoms, dialkylamino of 1-6 carbon atoms with alkyl moiety, fluorinated alkoxy of 1-6 carbon atoms, acyl of 2-7 carbon atoms, aryl or aroyl;

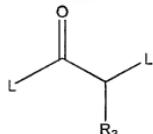
R<sub>3</sub> is hydrogen, alkyl of 1-6 carbon atoms, cycloalkyl, alkoxy of 1-6 carbon atoms, fluorinated alkyl of from 1 to 6 carbon atoms, alkyl sulfonamide of 1-6 carbon atoms,

15 1-6 carbon atoms per alkyl moiety, fluorinated alkoxy of 1-6 carbon atoms, acyl of 2-7 carbon atoms, aryl or aroyl; the process comprising the steps of:

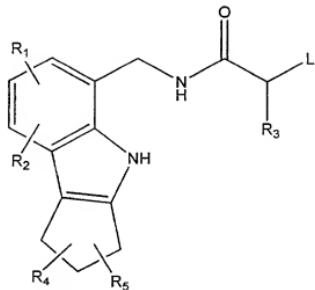
a) acylating a cyclopentaindole methylamine of the formula:



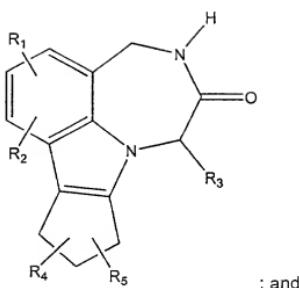
wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are with an acylating agent of the formula:



5 wherein R<sub>3</sub> is as defined above and L represents a leaving group to produce an acylated compound of the formula:

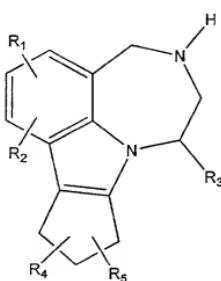


b) cyclizing the acylated compound of step a) to produce an optionally substituted Diazabeno[cd]cyclopenta[a]azulen-6-one compound of the formula:

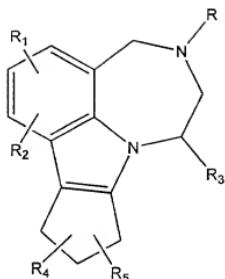


; and

c) reducing the Diazabenzocyclopenta[cd]azulene-6-one compound of step  
 b) to produce an optionally substituted Diazabenzocyclopenta[cd]azulene compound  
 5 of the formula:



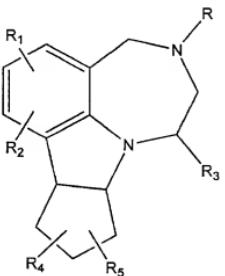
2. The process of Claim 1 further comprising the step of treating the  
 Diazabenzocyclopenta[cd]azulene compound of step c) of Claim 1, above, with an  
 10 alkylating agent to provide an alkylated compound of the formula:



wherein R is an alkyl group of 1-6 carbon atoms, cycloalkyl of from 3 to 7 carbon atoms,  
or

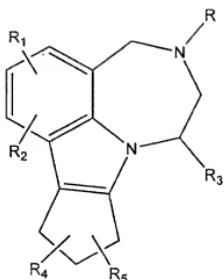
5 -CH<sub>2</sub>-cycloalkyl of from 3 to 7 carbon atoms; and R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as  
described in Claim 1.

3. A process of Claim 2 further comprising the step of treating the alkylated  
compound of Claim 2 with a reducing agent to produce a compound of the formula:



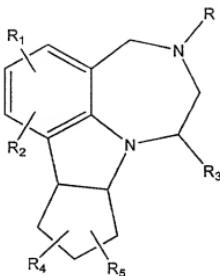
10 wherein R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as described in Claim 2.

4. The process of Claim 1 further comprising the step of treating the  
Diazabenzocyclopenta[cd]azulene compound of step c) of Claim 1, with an acylating  
agent to produce an acylated compound of the formula:



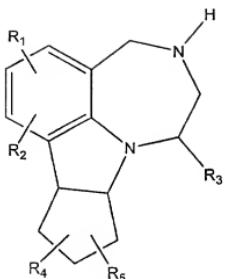
wherein R is an acyl group of from 2 to 7 carbon atoms and R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as described in Claim 1.

5 5. A process of Claim 4 further comprising the step of treating the acylated compound of Claim 4 with a reducing agent to produce a compound of the formula:



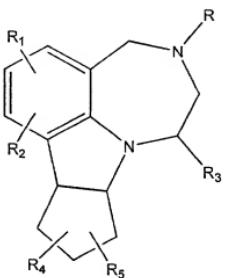
wherein R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as described in Claim 4.

10 6. A process of Claim 1 comprising a further step of treating the optionally substituted Diazabenzocyclopenta[a]azulene compound of step c) of Claim 1 with a reducing agent to provide a reduced compound of the formula:



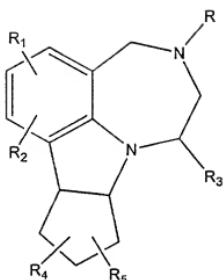
wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as described in Claim 1.

7. A process of Claim 6 further comprising the step of treating the reduced compound of Claim 6 with an alkylating agent to provide an alkylated compound of the formula:



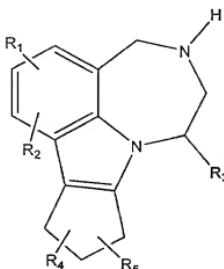
wherein R is an alkyl of 1-6 carbon atoms, cycloalkyl of from 3 to 7 carbon atoms, or -CH<sub>2</sub>-cycloalkyl of from 3 to 7 carbon atoms; and R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as described in Claim 1.

8. A process of Claim 6 further comprising the step of treating the reduced compound of Claim 6 with an acylating agent to provide an acylated compound of the formula:



wherein R is an acyl group of from 2 to 7 carbon atoms; and R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> and R<sub>5</sub> are as described in Claim 1.

5 9. A process of Claim 1 further comprising the step of treating the compound of the formula:



10 wherein R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1, with a pharmaceutically acceptable inorganic or organic acid to form a pharmaceutically acceptable salt of the compound.

10. The process of Claim 9 wherein the pharmaceutically acceptable inorganic or organic acid is selected from the group of hydrochloric acid, hydrobromic acid, hydroiodic acid, sulfuric acid, phosphoric acid, nitric acid, acetic acid, propionic acid, citric acid, maleic acid, malic acid, tartaric acid, phthalic acid, succinic acid,

methanesulfonic acid, toluenesulfonic acid, naphthalenesulfonic acid, camphorsulfonic acid, and benzenesulfonic acid.

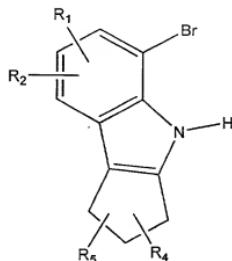
11. A process of Claim 1 wherein each of R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are  
5 hydrogen.

12. A process of Claim 1 wherein R<sub>1</sub> and R<sub>3</sub> are hydrogen and R, R<sub>2</sub>, R<sub>4</sub> and  
R<sub>5</sub> are as defined in Claim 1.

10 13. A process of Claim 1 wherein R<sub>1</sub>, R<sub>3</sub> and R<sub>5</sub> are hydrogen and R, R<sub>2</sub> and  
R<sub>4</sub> are as in Claim 1.

14. A process of Claim 1 wherein R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub> are hydrogen and R<sub>5</sub>  
is as defined in Claim 1.

15 15. A compound of the formula:



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1.

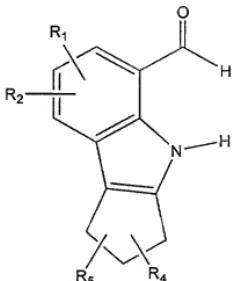
20 16. A compound of Claim 15 which is selected from the group of:  
5-Bromo-1,2,3,4-tetrahydro-cyclopenta[b]indole;

5-Bromo-3-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indole;

25 5-Bromo-2-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indole; and

5-Bromo-1-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indole.

17. A compound of the formula:



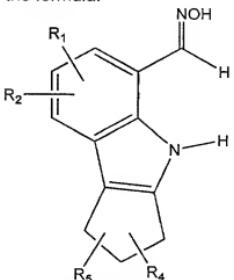
wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1.

5

18. A compound of Claim 17 which is selected from the group of:

- 1,2,3,4-Tetrahydro-cyclopenta[b]indole-5-carbaldehyde;
- 10 3-Methyl-1,2,3,4-tetrahydro-cyclopenta[b]indole-5-carbaldehyde;
- 2-Methyl-1,2,3,4-tetrahydro-cyclopenta[b]indole-5-carbaldehyde; and
- 15 1-Methyl-1,2,3,4-tetrahydro-cyclopenta[b]indole-5-carbaldehyde.

19. A compound of the formula:



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1.

20

20. A compound of Claim 19 which is selected from the group of:

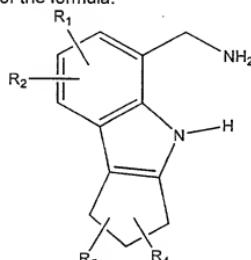
1,2,3,4-Tetrahydro-cyclopenta[*b*]indole-5-carbaldehyde oxime;

5 3-Methyl-1,2,3,4-tetrahydro-cyclopenta[*b*]indole-5-carbaldehyde oxime;

2-Methyl-1,2,3,4-tetrahydro-cyclopenta[*b*]indole-5-carbaldehyde oxime; or

10 1-Methyl-1,2,3,4-tetrahydro-cyclopenta[*b*]indole-5-carbaldehyde oxime.

21. A compound of the formula:



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1.

15

22. A compound of Claim 21 which is selected from the group of:

C-(1,2,3,4-Tetrahydro-cyclopenta[*b*]indol-5-yl)-methylamine;

20

C-(3-Methyl-1,2,3,4-tetrahydro-cyclopenta[*b*]indol-5-yl)-methylamine;

C-(2-Methyl-1,2,3,4-tetrahydro-cyclopenta[*b*]indol-5-yl)-methylamine; or

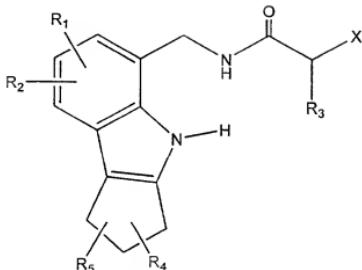
25

C-(1-Methyl-1,2,3,4-tetrahydro-cyclopenta[*b*]indol-5-yl)-methylamine.

30

35

23. A compound of the formula:



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1 and X is selected from Cl, Br or I.

5

24. A compound of Claim 23 which is selected from the group of:

2-Chloro-N-(1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

10 2-Chloro-N-(3-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

2-Chloro-N-(2-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

15 2-Chloro-N-(1-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

2-Bromo-N-(1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

20 2-Bromo-N-(3-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

2-Bromo-N-(2-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

25 2-Bromo-N-(1-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

2-Iodo-N-(1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

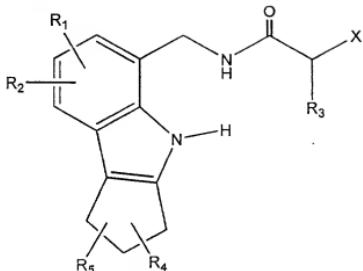
30 2-Iodo-N-(3-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide;

2-Iodo-N-(2-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide; or

2-Iodo-N-(1-methyl-1,2,3,4-tetrahydro-cyclopenta[b]indol-5-ylmethyl)-acetamide.

35

25. A compound of the formula:



wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub> are as defined in Claim 1 and X is selected from Cl, Br or I.

5

26. A compound of Claim 25 which is selected from the group of:

4,5,9,10-Tetrahydro-8*H*-5,7*a*-diaza-benzo[*cd*]cyclopenta[*a*]azulen-6-one;

10 8-Methyl-4,5,9,10-tetrahydro-8*H*-5,7*a*-diaza-benzo[*cd*]cyclopenta[*a*]azulen-6-one;

9-Methyl-4,5,9,10-tetrahydro-8*H*-5,7*a*-diaza-benzo[*cd*]cyclopenta[*a*]azulen-6-one; and

15 10-Methyl-4,5,9,10-tetrahydro-8*H*-5,7*a*-diaza-benzo[*cd*]cyclopenta[*a*]azulen-6-one.

20

25